



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,159	03/05/2002	Kunio Koike	111595	5457

25944 7590 11/04/2004

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

BELL, PAUL A

ART UNIT	PAPER NUMBER
----------	--------------

2675

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PT

Office Action Summary	Application No. 10/090,159	Applicant(s) KOIKE, KUNIO	
	Examiner PAUL A BELL	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho (3,984,973) in view of Fujisawa (US 2004/0037173) and Morokawa (5,101,116).

With regard to claim 1 Ho teaches a panel driving control device(SEE Ho figures 1 and 2, and abstract and column 1, lines 40-50.), comprising: a liquid-crystal panel control device that controls the driving of a liquid-crystal panel by applying a voltage to said panel(SEE Ho figure 2, items 82, 110, 108, 116, 114, 112, 22, 24, 26, and 28); an second panel control device that controls the driving of a second panel by applying an voltage to said panel (SEE Ho figure 2, items 120, 118, 30, 32, 34, and 36); and a frequency supply device that supplies, to said liquid-crystal panel control device and said second panel control device, a driving frequency which is required for the second panel to display an object to be displayed without flicker when said second panel is driven, wherein said liquid-crystal panel control device and said second panel control device control said driving on the basis of the driving frequency supplied by said frequency supply device(figure 2, item 60 and also there is no flicker in second panel when you hold down push buttons 50 and 52).

However Ho does not teach that the second panel control device being an organic-EL-panel control device or the second panel being electro luminescence panel, he instead teaches a LED.

Fujisawa teaches a time keeping apparatus with a display which was a liquid crystal display (LCD), an organic electroluminescence (EL) display, or a light emitting diode (LED)(SEE Fujisawa section [0168] and figure 14 item 121). This reference is cited to illustrate that it was well known to use different types of displays in a time keeping device such as a watch.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Ho watch by taking out the LED panel and replacing it with the EL panel taught by Fujisawa because the EL was considered an obvious equivalent to a LED since they both emit light when a voltage is applied and are both commonly used in watches.

And further the combination of Ho and Fujisawa does not teach the voltage being AC for both the LCD and EL.

However Morokawa teaches, "a drive circuit for a display driven by an alternating current (AC), more particularly relates to a drive circuit for an electroluminescence (EL) display device and a liquid crystal display device including a plurality of passive addressing type and active addressing type liquid crystal pixels arranged in a matrix form, further particularly relates to a construction of an integrated circuit for driving a common timing electrode and a construction of a drive circuit using the same" (SEE Morokawa column 1, lines 6-16) and "an integrated circuit consisting of transistors and having multiple output terminals can be used for driving liquid crystal or EL type display means" (SEE Morokawa column 2, lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Ho and Fujisawa watch by taking out the two

controllers and replacing it with just one controller which is used to drive both the EL and LCD as taught by Morokawa because the motivation of using less parts is well-known in the prior art.

With regard to claim 2 the combination of Ho / Fujisawa / Morokawa suggest a panel driving control device according to claim 1, the driving frequency supplied by said frequency supply device being approximately twice the driving frequency which is normally required for the liquid-crystal panel to be driven (obvious based on Nyquist criterion and would be needed to avoid flicker).

With regard to claim 3 the combination of Ho / Fujisawa / Morokawa suggest a panel driving control device according to claim 1, the driving frequency supplied by said frequency supply device being a frequency which is greater than or equal to 50 Hz (obvious because the norm is 50 HZ to avoid flicker also see Morokawa column 2, lines 21-24).

With regard to claim 4 the combination of Ho / Fujisawa / Morokawa was found above to teach most of the limitations and in addition the combination teaches “a driving voltage by which the on/off state of both said liquid-crystal panel and said organic electro luminescence panel can be controlled by a common driving method, wherein said liquid-crystal panel control device and said organic-EL-panel control device control said driving on the basis of said supplied driving voltage” (SEE Morokawa column 1, lines 6-16, column 2, lines 4-7 and figures 2A-C).

With regard to claim 5 the combination of Ho, Fujisawa and Morokawa suggest a panel driving control device according to claim 4, “the driving voltage supplied by said common driving method and said voltage supply device being determined by said single color displayed on said organic electro luminescence panel.” (obvious feature because since the EL panel

Art Unit: 2675

requires the most voltage to operate, it would be used to determine the maximum voltage and a simple divider would be used to reduce the voltage needed by LCD).

With regard to claim 6 the combination of Ho, Fujisawa and Morokawa was shown above to teach most of the limitations of claim 6 and in addition the combination suggest an EL displaying a plurality of colors(because multi-color EL displays are well-known in the prior art and one of ordinary skill would have been motivated to prefer more than one color because they are more marketable), a driving method selection device that selects a driving voltage and a driving method for driving said liquid-crystal panel and said organic electro luminescence panel in accordance with the display color displayed by said organic electro luminescence panel (SEE Ho figure 2 items 50 and 52 for selection means which will select the driving voltage and driving method based on user wanting to see the EL or LCD display); a driving method reporting device that reports the driving method selected by said driving method selection device to said liquid-crystal panel control device and said organic-EL-panel control device (Obvious feature because when one is selected it means the other one is not selected);

With regard to claim 7 the combination of Ho, Fujisawa and Morokawa, teaches a panel driving control device according to claim 6, said driving method selection device selecting a driving voltage suitable for driving a display color displayed by said organic electro luminescence panel from among a plurality of driving voltages of different magnitudes, and selecting a driving method of a duty ratio suitable for driving a display color to be displayed by said organic electro luminescence panel from among a plurality of driving methods of different duty ratios; (because it is obvious that since were using the same driver to drive either an LCD

Art Unit: 2675

or EL which require different voltages and duty ratios to work there would have been a plurality of driving voltages of different magnitude and different duty ratios).

With regard to claim 8 the combination of Ho, Fujisawa and Morokawa, was found above to teach most of the limitations of claim 8 and in addition a wristwatch-type information device (SEE Ho figure 1), a power-supply device that supplies power to said panel driving control device (It is obvious that a digital watch would have power as broadly claimed); and a clock supply device that supplies, to said panel driving control device, a clock signal required for the panel driving control device to perform driving control (figure 2, item 6).

With regard to claim 9 all of the limitations have been met above because a watch is a portable device.

With regard to claims 10-14 all of the limitations have been met above in claims above.

With regard to claims 15 and 16 since the apparatus above was shown to read on the prior art the method of operation of the apparatus would have been obvious.

Response to Arguments

3. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argued on pages 8-10 that the prior art used in previous rejection did not demonstrate an AC voltage being used to drive both a LCD and EL device. The examiner references the new grounds of rejection where the Morokawa reference is added to address these arguments. And the Takebe reference is not used to avoid applicants alleged statements related to it being viewed as non analysis art of which examiner disagrees because it is also

Art Unit: 2675

demonstrates a multiple display LCD and EL so therefore viewed as analysis art which can be used if needed.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takebe (5,898,442) teaches that the structure of a display controller can be designed so that an EL display and a liquid crystal display can be driven using the same circuit structure, SEE column 5, lines 26-47.

Heropoulos et al. (US 2001/0018809) teaches an inverter 26 converts the DC voltage of the batteries into the AC voltage required to activate the EL lamps SEE section [0041] and further Heropolos et al. teaches "an El display device of the type depicted may be used in a wide variety of products including ... watches display", SEE section [0074].


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019. If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.


Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or Faxed to: (703) 872-9306

Or Hand-delivered to: Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor
(Receptionist).


Paul Bell
Art unit 2675
October 26, 2004


CHANH NGUYEN
PRIMARY EXAMINER